THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper 14

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte JUERGEN THOMAS, PETER SCHREYER, KNUT OPPENLAENDER, WOLFGANG GUENTHER and LOTHAR FRANZ,

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Appeal 97-1554
Application 08/495,593[1]

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ON BRIEF

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Before: McKELVEY, Senior Administrative Patent Judge, and SCHAFER and LEE, Administrative Patent Judges.

McKELVEY, Senior Administrative Patent Judge.

Decision on appeal under 35 U.S.C. § 134

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[1] Application for patent filed 2 August 1995. Applicants claim the benefit of the filing date of PCT/EP94/00722, filed 9 March 1994 and German patent application P 43 09 074.5, filed 20 March 1993. The real party in interest is BASF Aktiengesellschaft.

The appeal is from a decision of the Primary Examiner rejecting claims 1-5 and 7, all the claims in the application on appeal. We affirm.

A. Findings of fact

The record supports the following findings by a preponderance of the evidence.

The invention

1. The invention is readily understood by reference to claim 1.

2. Claim 1 calls for a "mixture" which is "suitable as a fuel additive" comprising Component A and Component B.

Component A

3. Component A is an amine, polyamine or alkanolamine having (specification, page 3, line 26 et seq.):

a. a hydrocarbon radical with an average molecular weight of from 500 to 10,000 which is

b. prepared by hydroformylation of a polyolefin and **amination** of the result

aldehyde and alcohol mixture under hydrogenating conditions.

4. Component A can be prepared in accordance with a process described in European Patent Application 244,616 (specification, page 4, line 10).

5. The European Patent Application corresponds to Kummer, U.S. Patent 4,832,702 (1989) (Appeal Brief, page 3).

6. An amine, polyamine or alkanolamine made by the process of step b of Finding 3 is "chlorine-free" (specification, page 4).

7. The "polyamines" are **preferred** and ammonia is very **particularly preferred** (specification, page 4, lines 27-30) as the material used to accomplish amination.

8. The **preferred** molecular weight of the hydrocarbon radical is 600-2,500.

9. The **particularly preferred** molecular weight of the hydrocarbon is 700-1,500 (specification, page 3, lines 31-32).

10. The hydrocarbon radical is obtained by the polymerization of olefins, **preferably** a C_2-C_6 olefin, and

particularly preferred is isobutene (specification, page 3, lines 35-37).

Component B

11. Component B is a polyetheramine (specification, page 4, line 31 et seq.).

12. According to the specification, Component B can be prepared in accordance with a process described in Rath, U.S. Patent 5,112,364 (1992) (specification, page 6, lines 17-18).

The claims on appeal

13. Claims 1-5 and 7 are on appeal.

14. Applicants separately argue the patentability of claims 3 and 7 (Appeal, Brief, page 2).

15. Claim 3 limits claim 1:

> A mixture as defined in claim 1, wherein the hydrocarbon radical of the component A is a polyisobutyl radical.

16. Claim 7 is limited to a "fuel for gasoline engines containing small amounts" of Component A and Component B.

The examiner's rejection

17. The examiner has rejected claims 1-5 and 7 as being unpatentable under 35 U.S.C. § 103 over Kummer and Rath.

Kummer

18. Kummer describes fuel or lubricant compositions which include a Component A containing polyisobutyl amines, optionally with polybutyl amines (col. 1, lines 39-51).

19. Component A is made by a hydroformulation process (col. 4, lines 16-25).

20. According to Kummer, use of Component A prevents the formation of deposits in the intake system of internal combustion engines (col. 1, lines 35-38).

21. Further according to Kummer (col. 5, lines 62-68):

> The novel fuel or lubricant composition has a number of advantages over the prior art, for example the fact that the compounds in question are saturated compounds, no corrosion problems occur, synthesis is more economical and causes less environmental pollution, and the products are not contaminated by chlorine or bromine.

Rath

22. Rath describes gasoline fuels which contain small amount of polyetheramine Component B.

23. Polyetheramines are known fuel additives for cleaning carburetors, injectors and valves (col. 1, lines 16-18).

24. Rath also reveals that fuels with polyetheramines may also contain polybuteneamines as carburetor, injector and valve detergents (col. 5, lines 58-62).

The examiner's rationale

25. The examiner held that the claimed subject matter would have been obvious in light of Kummer and Rath.

26. The examiner found that the prior art reveals the use of Component A-type and Component B-type materials to improve valve-cleaning in internal combustion engines.

27. Given that Rath describes the use of polyetheramines in fuels as fuel additives for cleaning various engine parts and further reveals that polybuteneamines may also be added, the examiner reasoned that it would have been obvious to also use the polyisobutylamines of Kummer in the Rath fuels.

28. The examiner declined to give much weight to a showing in applicants' specification and a Rule 132 Schwahn declaration.

Showing in the specification

29. In their specification, applicants compare fuels which:

(1) do not contain Component A or Component B,

(2) which contain Component A and a polyether (not a polyetheramine), and

(3) which contain a Component A and a Component B.

30. Component A is said to be a "polyisobutylamine" having an average molecular weight of 1000 prepared as described in Kummer (specification, page 8, lines 23-26).

31. However, the specification does not reveal whether isobutene alone was used to make the "polyisobutylamine" or whether, as Kummer would permit, a mixture of isobutene and butene was used.

32. According to applicants, the comparisons show:

(1) unexpected results with respect to clearness of the Component A and Component

B mixtures (specification, page 9, lines 1-10);

(2) improved results in deposits on intake valves (specification, page 9, lines 20-30) and

(3) improved octane requirement increase values (specification, page 11, lines 25-35).

The Schwahn declaration

33. The Schwahn declaration reports the results of experimentation said to have been carried out.

34. Schwahn, who seems qualified to carry out the experiments, is said to have made a fuel mixture I "according to the *** application" (Declaration, page 2) and fuel mixture II for comparison.

35. Fuel mixture I was made using a polyisobutylamine having an average molecular weight of about 1000 produced via a hydroformylation process.

36. Fuel mixture II was made using a polyisobutylamine having an average molecular weight of about 1000 produced via a chlorination process.

37. The "average valve deposits (mg)" for mixtures I and II, and a mixture which did not contain a polyisobutylamine are reported as follows:

Mixture I	7
Mixture II	28
No additive	123

The examiner's concerns with respect to the showings

38. The examiner notes, in effect, that the comparison in the specification is not with the closest prior art.

39. Thus, the examiner notes that Kummer describes fuels with Component A and Rath describes fuels with Component B.

40. The examiner did not find persuasive a comparison of the claimed invention with either Kummer's fuel having only polyisobutylamines or Rath's having only polyetheramines.

41. The examiner also noted, that based on the prior art (in particular Kummer), one skilled in the art would have expected the results.

B. Discussion

1. Prima facie obviousness

Applicants suggest in the Appeal Brief that the showings in the specification and the Schwahn overcome any "possible" prima facie case of obviousness made out by the prior art (page 2). Not clear on this record is whether applicants maintain that the examiner has failed to make out a prima facie case of obviousness. Rule 192 [37 CFR § 1.92] requires an applicant to set out the reasons why a rejection is not proper. Accordingly, we consider only the reasons advanced by applicants in their appeal brief--not some other arguments which we can imagine could have been made.

The sole argument we have uncovered which arguably relates to prima facie obviousness appears on page 5 of the Appeal Brief. There applicants contend that there is no hint in Rath of the use of a polyisobutylamine manufactured by the hydroformylation process of Kummer. According to counsel for applicants, at the time Rath filed a patent application (5 August 1988 in Germany), the most common commercially available polyisobutyamines were manufactured via the chlorine route. Applicants reason that the reference in Rath to

polyisobutylamines is a reference to the then commercial product which contains chlorine.

The record suggests that at the time Rath filed in Germany (5 August 1988) the Kummer German Patent Application had probably been published (eighteen months after 4 April 1986 or about 4 October 1987). In any event, the Kummer U.S. Patent was issued (23 May 1989) before Rath filed in the United States (29 April 1991). More to the point, however, is the proposition that it does not matter to what polyisobutylamines Rath may have been referring. In re Kleinman, 484 F.2d 1389, 179 USPQ 244 (CCPA 1973) (there is no presumption, rebuttable or not, that the holder of a patent had constructive or actual knowledge of specific prior art when he made the invention -- hypothetical person skilled in art does have constructive knowledge). A person having ordinary skill in the art at the time applicants made their invention, aware of both Kummer and Rath, would have been highly motivated to use the polyisobutylamines of Kummer if for no other reason that to avoid the presence of chlorine. The appeal does not involve a question of what might have been obvious to Rath. Rather, the issue is whether the claimed

subject matter would have been obvious in view of Kummer and Rath at the time applicants (not Rath) made the claimed invention.

2. Applicants' rebuttal showings

a.

The examiner found, in effect, that the showing in the specification did not involve a comparison of the claimed invention with the closest prior art. As a general proposition, when a comparison is made between a claimed invention and the prior art, the comparison must be between the claimed invention and the closest prior art. In re Baxter Travenol Lab., 952 F.2d 388, 392, 21 USPQ2d 1281, 1285 (Fed. Cir. 1991) (when unexpected results are used as evidence of nonobviousness, the results must be shown to be unexpected compared with the closest prior art); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) (same); In re DeBlauwe, 736 F.2d 699, 705, 222 USPQ 191, 196 (Fed. Cir. 1984) (due to the absence of tests comparing appellants' heat shrinkable articles with those of the closest prior art, we conclude that appellants' assertions of unexpected results constitute mere argument); In re Merchant, 575 F.2d 865, 869, 197 USPQ 785,

788 (CCPA 1978) (an applicant relying upon a comparative showing to rebut a prima facie case of obviousness must compare claimed invention with the closest prior art).

In this case, the closest prior art would have been Rath, which describes a fuel having polyetheramines. Manifestly, the specification does not purport to compare the fuels of Rath with the fuels of claim 7. We find it somewhat curious that the comparison was not made given that applicants were actually aware of Rath (specification, page 6, lines 17-18).

b.

The examiner considered the Schwahn declaration (Examiner's Answer, page 6) and declined to give the declaration controlling weight. The examiner held that the declaration did not rebut the evidence supplied by the prior art and the examiner is correct. One skilled in the art necessarily would have expected an improvement with a polyisobutylamine free of chlorine. See Kummer, col. 5, lines 62-68 set out in Finding 21, supra). Nothing in the Schwahn declaration explains why the improved results reported therein would have been unexpected.

c.

We made the following additional observation in the event applicants elect to file a continuation following this appeal.

A showing of unexpected results generally should be commensurate in scope with the breath of the claims. In re Greenfield, 571 F.2d 1185, 1189, 197 USPQ 227, 230 (CCPA 1978) (showing of unexpected results must be commensurate in scope with breadth of claim); In re Kulling, 897 F.2d 1147, 1149, 14 USPQ2d 1056, 1058 (Fed. Cir. 1990) (same).

It is not apparent to us how the showing in the specification and the showing in the Schwahn declaration can be commensurate in scope with the breadth of the claims.

For example, the claims call for a hydrocarbon radical which, inter alia, may be various radicals, including polybutyl and polyisobutyl having a molecular weight of 500 to 10,000. The showing is limited to a polyisobutyl having a molecular weight of 1000. While applicants do not say why, a polyisobutylamine having a molecular weight of 1000 is particularly preferred. We have no reason to doubt the objective truth of applicants' statements regarding preferred and particularly preferred embodiments. But, we do not understand how a comparison based solely on the particularly

preferred embodiment can be commensurate in scope with a claim which also includes non-preferred embodiments.

A comparison using polyisobutylamine does not reveal what results might be obtained using a mixture of polybutylamine and polyisobutylamine as described by Kummer.

In the event of further prosecution, applicants may wish to submit a showing of which is commensurate in scope with the breadth of the claims.

C. Decision

For the reasons given, the decision of the examiner rejecting claims 1-5 and 7 under 35 U.S.C. § 103 over Kummer and Rath is affirmed.

AFFIRMED.

FRED E. McKELVEY, Senior)
Administrative Patent Judge)
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RICHARD E. SCHAFER) BOARD OF PATENT
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) INTERFERENCES
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